



## Case report

## Adenomyomatous polyp of the uterus: Report of an autopsy case and review of the literature

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## ARTICLE INFO

## Article history:

Received 10 January 2012

Accepted 13 February 2012

Available online 6 March 2012

## Keywords:

Adenomyomatous polyp

Endometrial polyp

Uterus

Endometrium

Autopsy

Post-mortem

## ABSTRACT

Adenomyomatous polyps of the endometrium are a rare subtype of endometrial polyps. In addition to the usual features of endometrial polyps, they also contain a smooth muscle component. Grossly they appear no different than ordinary endometrial polyps. In the case reported herein, a 23-year-old nulliparous female was killed in a traffic accident. In the course of the medicolegal autopsy, a small pedunculated growth was identified in the fundus of the endometrial cavity. Histologically the mass consisted of endometrial glands intimately mixed with smooth muscle and thick walled blood vessels, consistent with an adenomyomatous polyp. There was no history of tamoxifen use in this individual. To our knowledge this is the first report of post-mortem diagnosis of an adenomyomatous polyp. Furthermore, this is the first report of an individual with this diagnosis younger than the fourth decade. In the medicolegal setting, forensic pathologists are constantly faced with entities that, while they may not have caused death, may serve to educate practitioners about rare lesions. This individual's finding serves as one of those entities. This case reiterates the importance of the autopsy as not only the answer to an individual's death, but as an avenue for the discovery of entities that may have relevance to those who are still living.

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## 1. Introduction

Adenomyomatous polyp (polypoid adenomyoma) of the endometrium is a subtype of endometrial polyp consisting of smooth muscle, endometrial glands, and often scant endometrial stroma.<sup>1,2</sup> The few reports in the literature describe these as lesions grossly indistinguishable from ordinary endometrial polyps occurring in the fourth decade or later.<sup>1–8</sup> We report a case of an adenomyomatous polyp of the endometrium in a young nulliparous woman which was incidentally identified at a medicolegal autopsy. To our knowledge, this is the first case reported in a woman younger than the fourth decade as well as the first to be reported in the forensic setting. Furthermore, it is the third case reported with no association to tamoxifen therapy.

## 2. Case report

A 23-year-old woman was involved in a traffic accident in South India and died instantaneously. Her past medical history was relatively innocuous; there was no history of hormonal intervention via contraceptives or tamoxifen use. No history of dysfunctional uterine bleeding was obtained. The patient was nulliparous and had menstrual periods monthly since the age of 14.

Medicolegal investigation and autopsy were performed following the accident. Grossly the uterus, fallopian tubes, and ovaries weighed 200 g, measuring  $6.5 \times 5.5 \times 3$  cm. The broad ligaments were contused bilaterally. The fallopian tubes and ovaries were morphologically unremarkable. The uterus appeared enlarged and weighed 180 g. Cut section of the uterus revealed a dark brown pedunculated polyp arising from the fundus and projecting into the endometrial cavity (Fig. 1). The polyp measured  $1.3 \times 0.75 \times 0.5$  cm. Sectioning of the polyp revealed white to hemorrhagic areas. The remainder of the endometrium, lower

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Fig. 1. Cross section of the adenomyomatous polyp of the uterus in situ.

uterine segment, and cervix were grossly and histologically unremarkable.

Histologic examination of the polyp demonstrated endometrial glands with intervening smooth muscle fibers admixed with thick walled blood vessels (Figs.2 and 3). Most of the endometrial glands were small, although some showed dilatation. There was no mitotic activity in any of the examined slides. The pathologic diagnosis was adenomyomatous polyp of the endometrium.

### 3. Discussion

Endometrial polyps of the adenomyomatous type are rare.<sup>2,8</sup> Five cases have been reported to date, the details of which are presented in Table 1. Endometrial polyps are sessile masses, single or multiple of variable size ranging from 0.5 to 3 cm in diameter but occasionally large and pedunculated projecting into the endometrial cavity.<sup>3</sup> These polyps originate as focal hyperplasias of the basalis which develop into benign, localized overgrowths of endometrial tissue covered by epithelium and containing variable amounts of glands, stroma and blood vessels. A polyp with a smooth muscle stroma is referred to as an adenomyomatous polyp.<sup>1</sup>

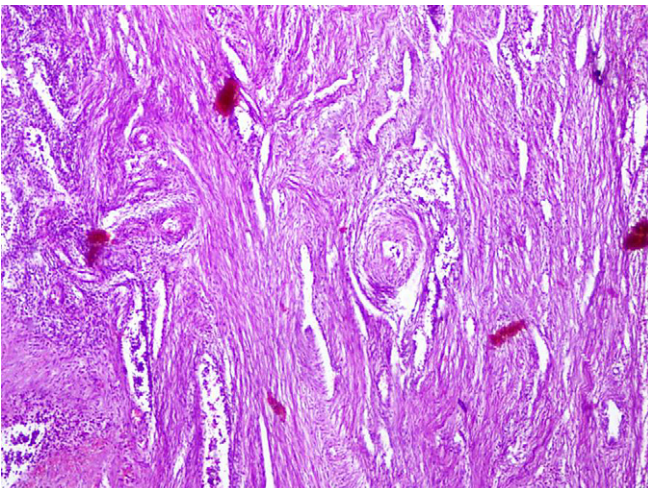


Fig. 2. Proliferating smooth muscle bundles with intermixed endometrial glands (hematoxylin and eosin, ×100).

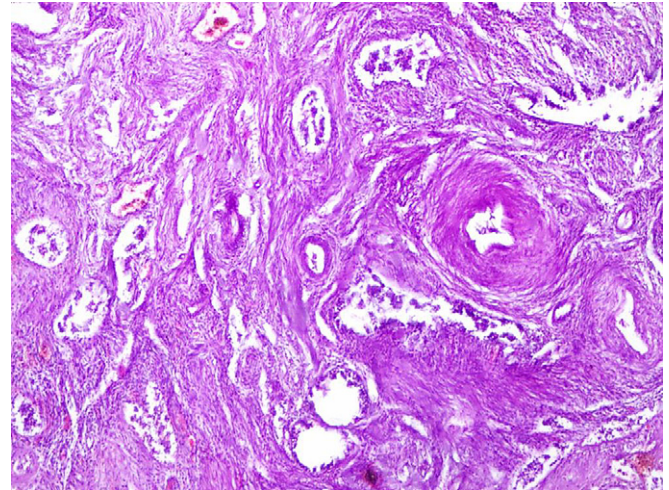


Fig. 3. Proliferating smooth muscle bundles with thick walled blood vessels and intermixed endometrial glands (hematoxylin and eosin, ×100).

The incidence of endometrial polyps is higher in women treated with tamoxifen than in untreated women: 8 to 36% versus 0 to 10%.<sup>4</sup> Endometrial polyps associated with tamoxifen therapy are unusually large and microscopically are cystic glandular dilatations with prominent and extensive stromal reaction.<sup>5</sup> These polyps, accordingly, are seen in older women, as that is the population most commonly treated for breast carcinoma.

Adenomyomatous polyps usually present in women in the fourth decade.<sup>1–7</sup> This may have something to do with the fact that these lesions generally act as benign neoplasms, but in some cases grow to such a large size and create such frustrating symptomatology for the woman that a hysterectomy is performed.<sup>2</sup> However, with this lesion first identified in the autopsy setting, it is reasonable to assume that these women could be followed for some time with this condition and if symptoms develop, a simple polypectomy could be performed.

The major differential diagnosis is adenomyosis. This is a diagnosis which should be reserved for a case in which the glands are seen in the myometrium one low power field below the myometrial-endometrial junction. This form is not usually seen in a polypoid configuration grossly, but often as an irregularly thickened myometrial wall.<sup>9</sup> Some cases of adenomyomatous polyps have clear cell features, which might introduce perivascular epithelioid cell tumor (PEComa) into the differential diagnosis and has been reported previously.<sup>2</sup> They are characterized by growth in a tongue like pattern similar in appearance to that of an endometrial stromal sarcoma. However, they are in the family of HMB-45 positive tumors, allowing this immunohistochemical stain to be of some use. Other lesions to rule out include atypical polypoid adenomyoma, in which the glandular component demonstrates

Table 1  
Review of cases of adenomyomatous polyp in the literature.

Authors	Patient age	Tamoxifen therapy	Associated symptoms	Year of Publication
Nasu et al. <sup>1</sup>	63	Yes	None	1997
Fitzhugh et al. <sup>2</sup>	32	No	Menometrorrhagia	2008
Takeuchi et al. <sup>4</sup>	64	Yes	None	2005
Nasu et al. <sup>6</sup>	37–57	No	Menorrhagia	1995
Sato et al. <sup>7</sup>	33	No	None; Arias-Stella reaction seen histologically	2007
Silverberg SG <sup>8</sup>	44	No	Menorrhagia	1975

significant atypia and the smooth muscle component is large, and adenosarcoma, which consists of benign glands with a malignant stroma and can be grossly polypoid.

In summary, we report the first case of an adenomyomatous polyp of the uterus found incidentally during a medicolegal autopsy in a woman in her third decade without any history of tamoxifen therapy or any gynecological manifestations indicative of adenomyomatous polyp of the uterus. In the medicolegal setting, forensic pathologists are constantly faced with entities that, while they may not have caused death, may serve to educate practitioners about rare lesions. This individual's finding serves as one of those entities. This case reiterates the importance of the autopsy as not only the answer to an individual's death, but as an avenue for the discovery of entities that may have relevance to those who are still living.

#### Conflict of interest statement

The authors have no conflict of interest to be declared.

#### Funding

None declared.

#### Ethical approval

None declared.

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